Translation of PCT/JP2022/038646

FIG. 1

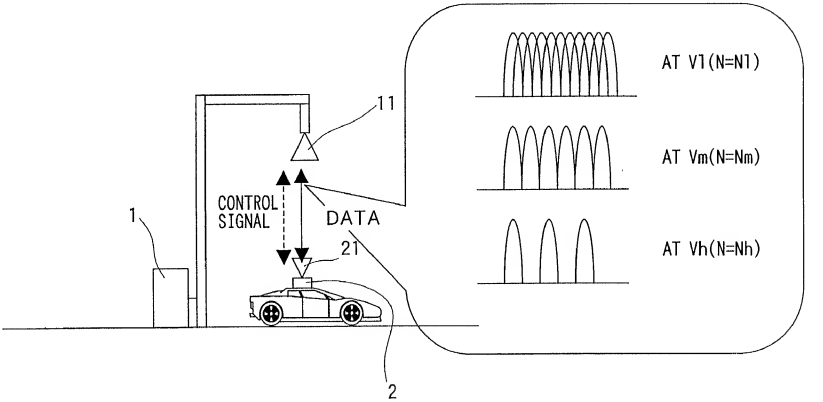


FIG. 2

VEHICLE SPEED V	NUMBER OF SUB-CARRIERS
V1	N1
Vm	Nm
Vh	Nh

FIG. 3

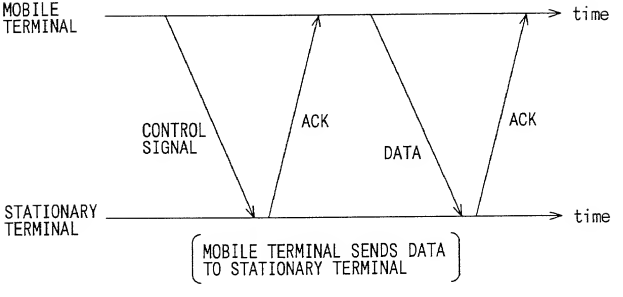


FIG. 4

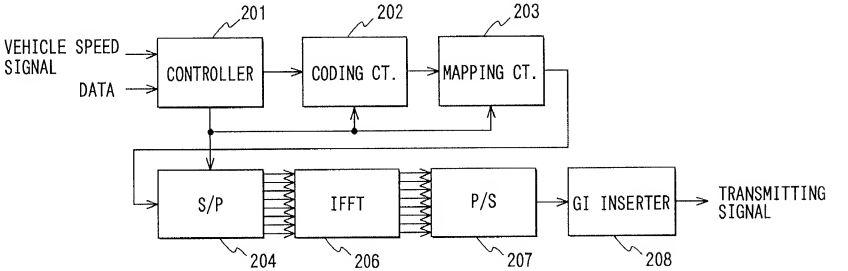
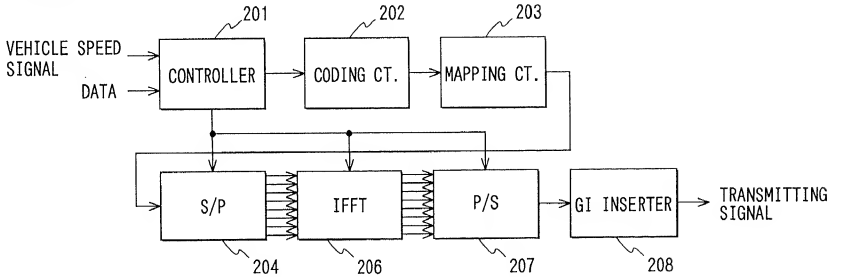
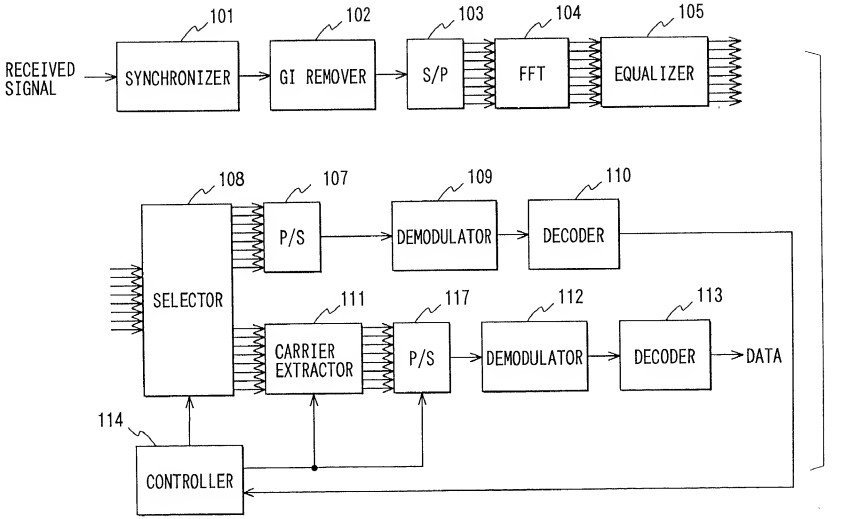

201
202
203
VEHICLE SPEED SIGNAL
DATA
CONTROLLER
CODING CT.
MAPPING CT.
S/P
IFFT
P/S
GI INSERTER
TRANSMITTING SIGNAL
204
206
207
208

FIG. 7


201
202
203
VEHICLE SPEED SIGNAL
DATA
CONTROLLER
CODING CT.
MAPPING CT.
S/P
IFFT
P/S
GI INSERTER
TRANSMITTING SIGNAL
204
206
207
208

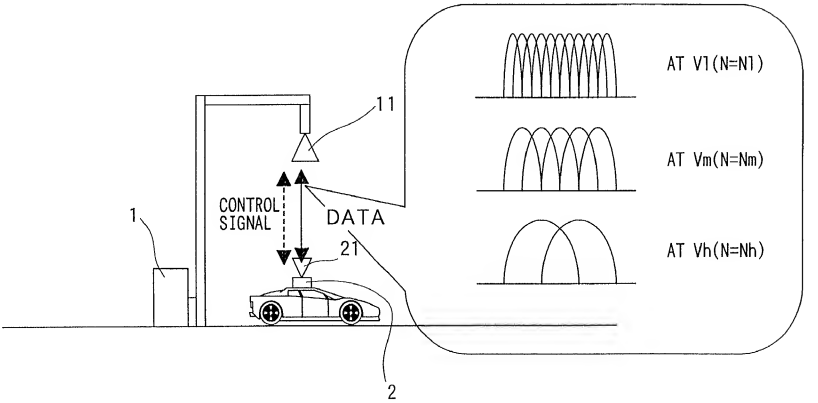
EP 2 154 820 A1

FIG. 5



TOYOTA 0226

FIG. 6



FOREIGN PATENT DOCUMENT

FIG. 8

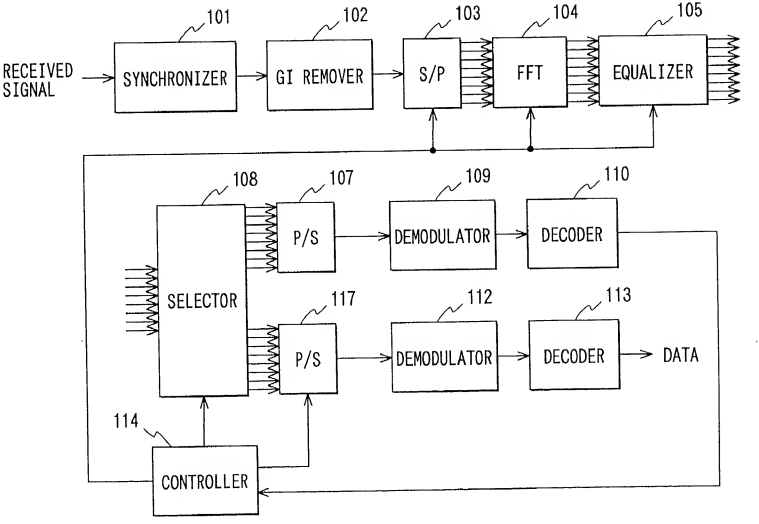
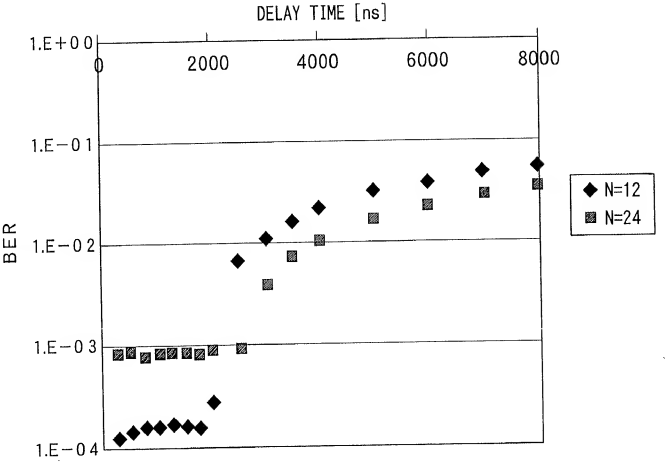


FIG. 9


DELAY TIME [ns]
1.E+00
0
2000
4000
6000
8000
1.E−01
1.E−02
1.E−03
1.E−04
BER
N=12
N=24

TOYOTA 02/28/2010

FIG. 10

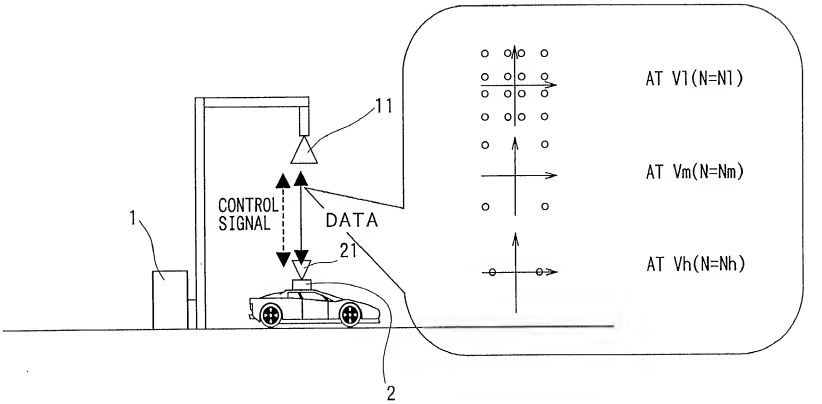


FIG. 11

VEHICLE SPEED V	MODULATION FORMULA
Vl	16QAM
Vm	QPSK
Vh	BPSk

FIG. 15

VEHICLE SPEED V	CODING RATE
Vl	R=3/4
Vm	R=9/16
Vh	R=1/2

FIG. 12

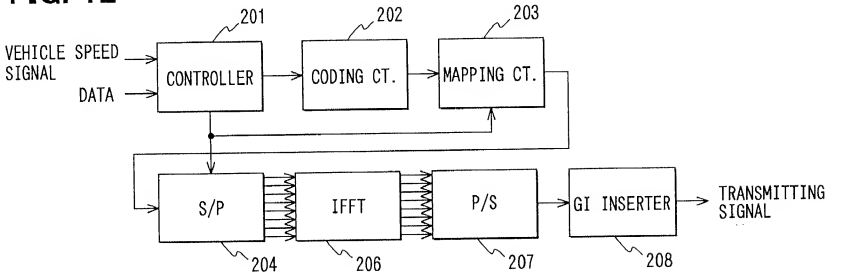
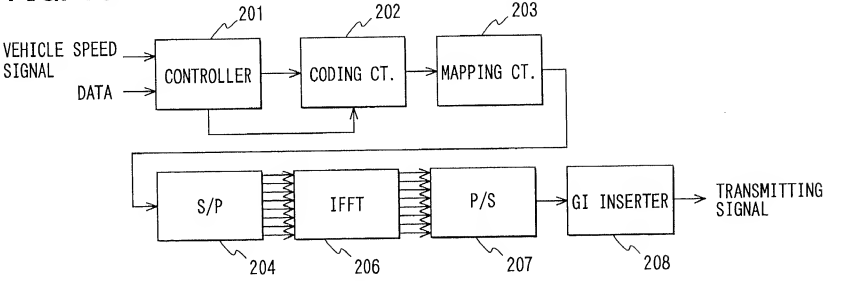
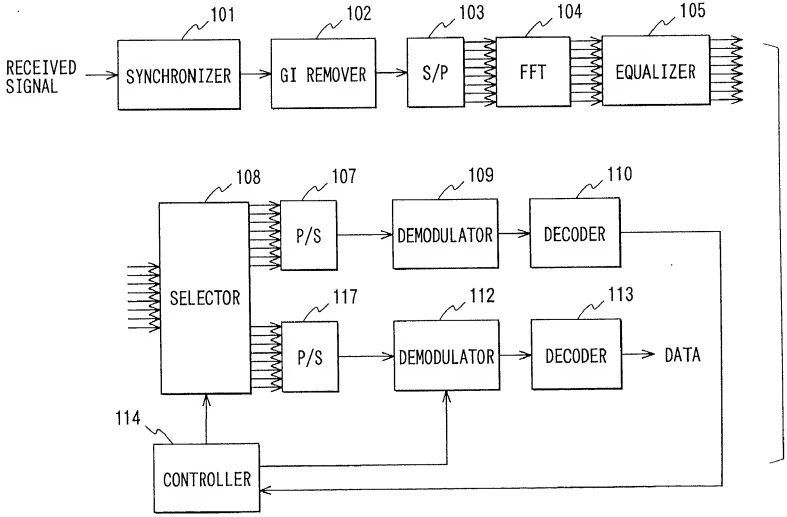

201
202
203
VEHICLE SPEED SIGNAL
DATA
CONTROLLER
CODING CT.
MAPPING CT.
S/P
IFFT
P/S
GI INSERTER
TRANSMITTING SIGNAL
204
206
207
208

FIG. 16


201
202
203
VEHICLE SPEED SIGNAL
DATA
CONTROLLER
CODING CT.
MAPPING CT.
S/P
IFFT
P/S
GI INSERTER
TRANSMITTING SIGNAL
204
206
207
208

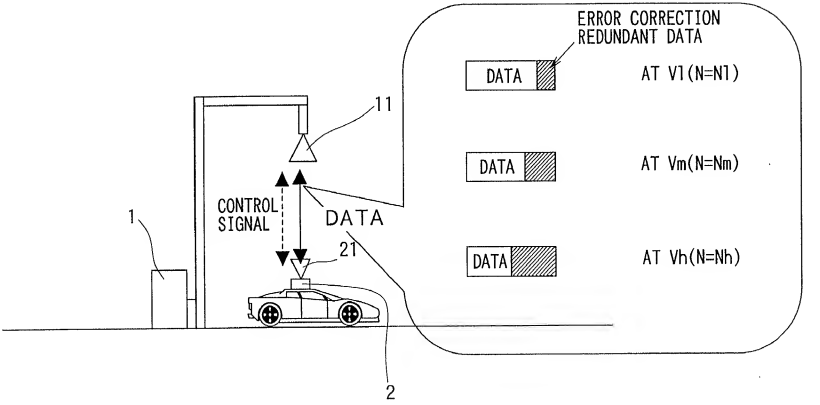
Patent Application Publication

FIG. 13



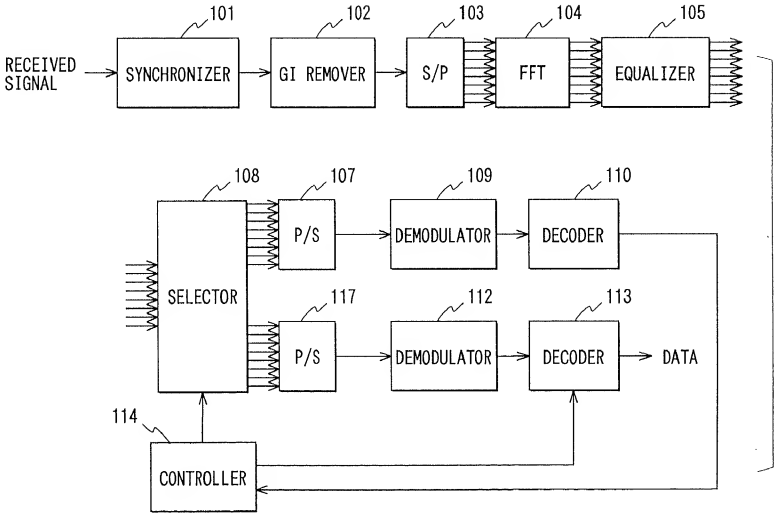
FUJITSU LIMITED

FIG. 14



PUBLISHED

FIG. 17



EP 1 950 080 A1

FIG. 18

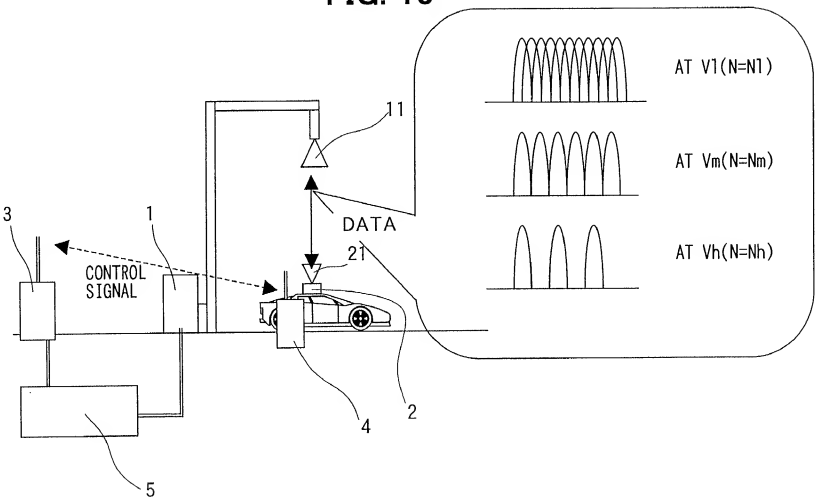
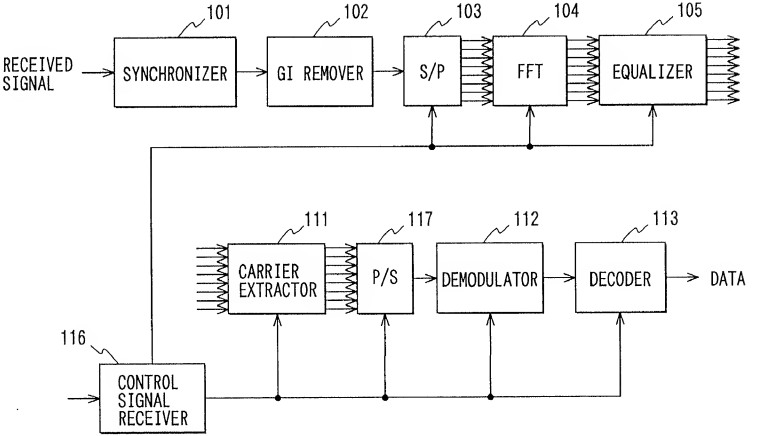
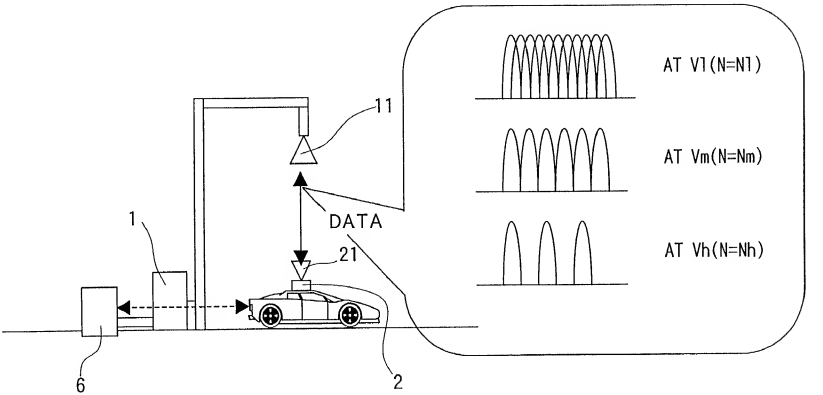


FIG. 19


101
102
103
104
105
RECEIVED SIGNAL
SYNCHRONIZER
GI REMOVER
S/P
FFT
EQUALIZER
111
117
112
113
CARRIER EXTRACTOR
P/S
DEMODULATOR
DECODER
DATA
116
CONTROL SIGNAL RECEIVER

EP 1 730 627 B1

FIG. 20



TOSHIBA 0624880

FIG. 21

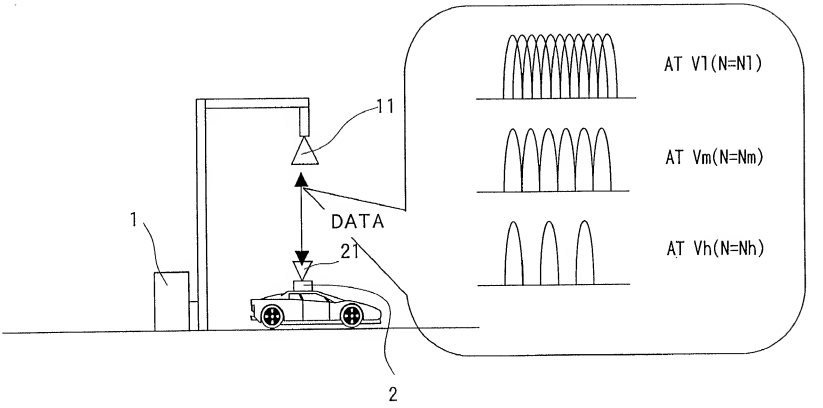


FIG. 22A

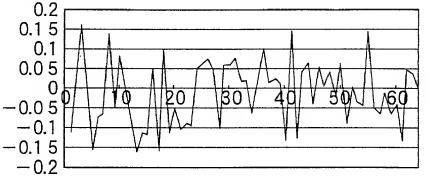


FIG. 22B

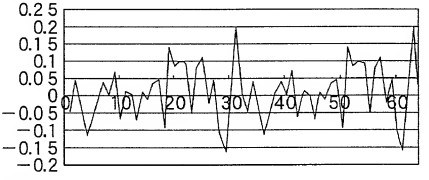


FIG. 22C

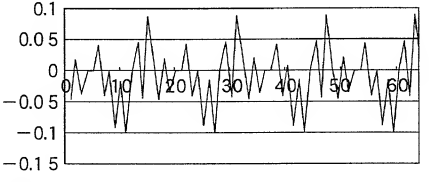


FIG. 22D

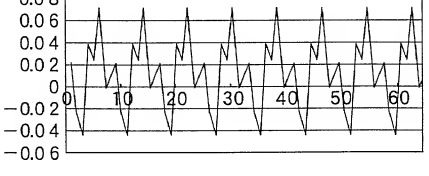


FIG. 23

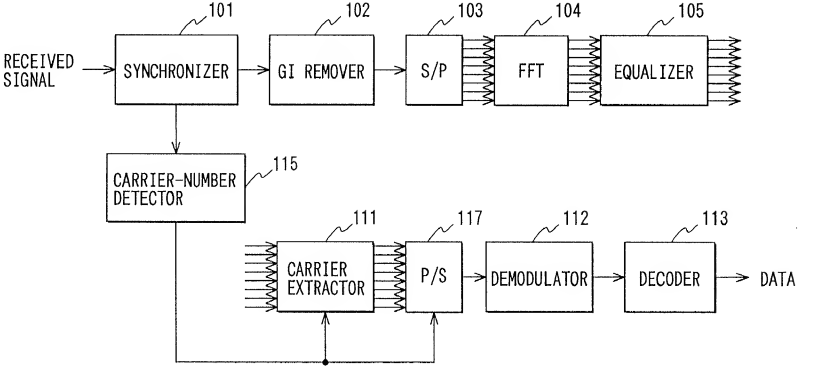

101
102
103
104
105
RECEIVED SIGNAL
SYNCHRONIZER
GI REMOVER
S/P
FFT
EQUALIZER
CARRIER-NUMBER DETECTOR
115
111
117
112
113
CARRIER EXTRACTOR
P/S
DEMODULATOR
DECODER
DATA

FIG. 24

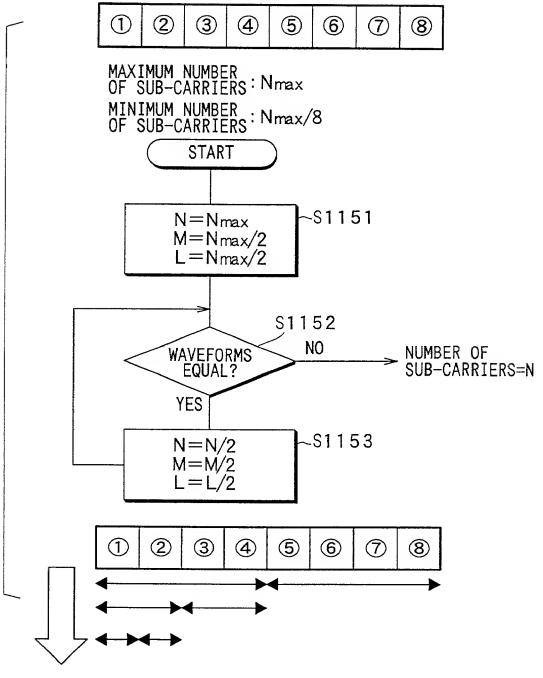

①
②
③
④
⑤
⑥
⑦
⑧
MAXIMUM NUMBER OF SUB-CARRIERS : Nmax
MINIMUM NUMBER OF SUB-CARRIERS : Nmax/8
START
N=Nmax
M=Nmax/2
L=Nmax/2
S1151
S1152
WAVEFORMS EQUAL?
NO
NUMBER OF SUB-CARRIERS=N
YES
N=N/2
M=M/2
L=L/2
S1153

FIG. 25

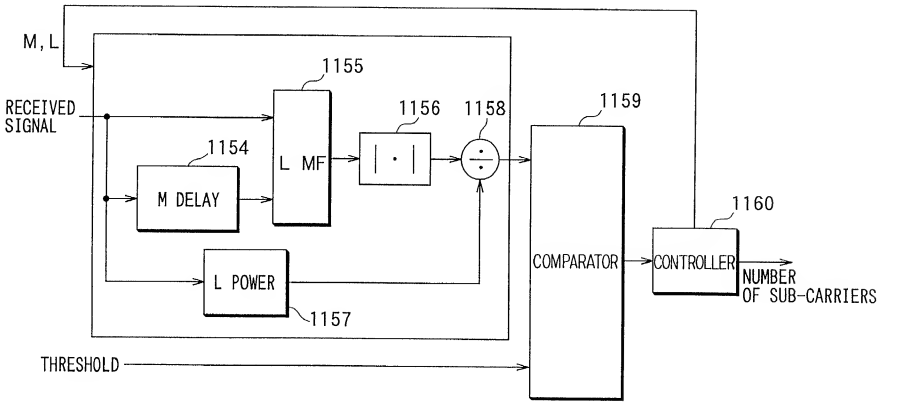
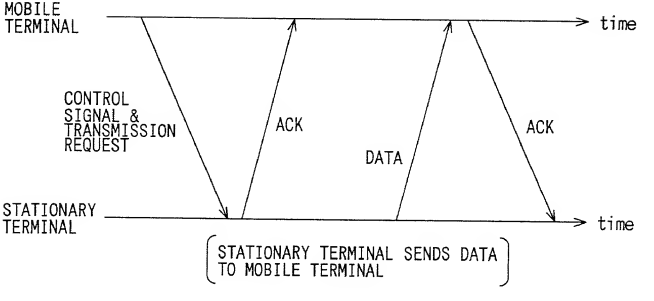

M, L
RECEIVED SIGNAL
1155
L MF
1156
1158
1159
1154
M DELAY
L POWER
1157
COMPARATOR
1160
CONTROLLER
NUMBER OF SUB-CARRIERS
THRESHOLD

FIG. 26


MOBILE TERMINAL
time
CONTROL SIGNAL & TRANSMISSION REQUEST
ACK
DATA
ACK
STATIONARY TERMINAL
time
STATIONARY TERMINAL SENDS DATA TO MOBILE TERMINAL